

SEQUENCE LISTING

<110> Gallatin, Michael W.
Van der Vieren, Monica

<120> Novel Human B2

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Asn	Ile	Thr	Phe	Asp	Val	Asp	Ser	Lys	Ala	Ser	Leu	Gly	Asn	Lys	Leu
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Leu	Leu	Lys	Ala	Asn	Val	Thr	Ser	Glu	Asn	Asn	Met	Pro	Arg	Thr	Asn
			900					905					910		
Lys	Thr	Glu	Phe	Gln	Leu	Glu	Leu	Pro	Val	Lys	Tyr	Ala	Val	Tyr	Met
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Val	Val	Thr	Ser	His	Gly	Val	Ser	Thr	Lys	Tyr	Leu	Asn	Phe	Thr	Ala
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Ser	Glu	Asn	Thr	Ser	Arg	Val	Met	Gln	His	Gln	Tyr	Gln	Val	Ser	Asn
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Leu	Gly	Gln	Arg	Ser	Leu	Pro	Ile	Ser	Leu	Val	Phe	Leu	Val	Pro	Val
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Arg	Leu	Asn	Gln	Thr	Val	Ile	Trp	Asp	Arg	Pro	Gln	Val	Thr	Phe	Ser
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Ile	Ala	Val	Cys	Gln	Arg	Ile	Gln	Cys	Asp	Ile	Pro	Phe	Phe	Gly	Ile
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Gln	Glu	Glu	Phe	Asn	Ala	Thr	Leu	Lys	Gly	Asn	Leu	Ser	Phe	Asp	Trp
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Ile	Leu	Phe	Asn	Asp	Ser	Val	Phe	Thr	Leu	Leu	Pro	Gly	Gln	Gly	Ala
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Phe	Val	Arg	Ser	Gln	Thr	Glu	Thr	Lys	Val	Glu	Pro	Phe	Glu	Val	Pro
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Asn	Pro	Leu	Pro	Leu	Ile	Val	Gly	Ser	Ser	Val	Gly	Gly	Leu	Leu	Leu
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Leu	Ala	Leu	Ile	Thr	Ala	Ala	Leu	Tyr	Lys	Leu	Gly	Phe	Phe	Lys	Arg
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Gln	Tyr	Lys	Asp	Met	Met	Ser	Glu	Gly	Gly	Pro	Pro	Gly	Ala	Glu	Pro
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Gln

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 <211> 1163
 <212> PRT
 <213> Homo sapiens

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 35 40 45
 Val Val Val Gly Ala Pro Gln Lys Ile Ile Ala Ala Asn Gln Ile Gly
 50 55 60
 Gly Leu Tyr Gln Cys Gly Tyr Ser Thr Gly Ala Cys Glu Pro Ile Gly
 65 70 75 80
 Leu Gln Val Pro Pro Glu Ala Val Asn Met Ser Leu Gly Leu Ser Leu
 85 90 95
 Ala Ser Thr Thr Ser Pro Ser Gln Leu Leu Ala Cys Gly Pro Thr Val
 100 105 110
 His His Glu Cys Gly Arg Asn Met Tyr Leu Thr Gly Leu Cys Phe Leu
 115 120 125
 Leu Gly Pro Thr Gln Leu Thr Gln Arg Leu Pro Val Ser Arg Gln Glu
 130 135 140
 Cys Pro Arg Gln Glu Gln Asp Ile Val Phe Leu Ile Asp Gly Ser Gly
 145 150 155 160
 Ser Ile Ser Ser Arg Asn Phe Ala Thr Met Met Asn Phe Val Arg Ala
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 Val Ile Ser Gln Phe Gln Arg Pro Ser Thr Gln Phe Ser Leu Met Gln
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 Phe Ser Asn Lys Phe Gln Thr His Phe Thr Phe Glu Glu Phe Arg Arg
 195 200 205
 Thr Ser Asn Pro Leu Ser Leu Leu Ala Ser Val His Gln Leu Gln Gly
 210 215 220
 Phe Thr Tyr Thr Ala Thr Ala Ile Gln Asn Val Val His Arg Leu Phe
 225 230 235 240
 His Ala Ser Tyr Gly Ala Arg Arg Asp Ala Ile Lys Ile Leu Ile Val
 245 250 255
 Ile Thr Asp Gly Lys Lys Glu Gly Asp Ser Leu Asp Tyr Lys Asp Val
 260 265 270

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Ile	Pro	Met	Ala	Asp	Ala	Ala	Gly	Ile	Ile	Arg	Tyr	Ala	Ile	Gly	Val
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Arg	Asp	Ser	Tyr	Leu	Gly	Tyr	Ser	Thr	Glu	Leu	Ala	Leu	Trp	Lys	Gly
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Val	Gln	Ser	Leu	Val	Leu	Gly	Ala	Pro	Arg	Tyr	Gln	His	Ile	Gly	Lys
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Pro	His	Tyr	Tyr	Glu	Gln	Thr	Arg	Gly	Gly	Gln	Val	Ser	Val	Cys	Pro
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Leu	Pro	Arg	Gly	Trp	Arg	Arg	Trp	Trp	Cys	Asp	Ala	Val	Leu	Tyr	Gly
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Gly	Pro	Ser	Ile	Ser	Pro	Ser	His	Ser	Gln	Arg	Ile	Ala	Gly	Ser	Gln
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Glu	Gln	Val	Val	Ser	Glu	Gln	Thr	Leu	Val	Gln	Ser	Asn	Ile	Cys	Leu
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Tyr	Ile	Asp	Lys	Arg	Ser	Lys	Asn	Leu	Leu	Gly	Ser	Arg	Asp	Leu	Gln
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Arg	Ala	Ile	Phe	Gln	Glu	Thr	Lys	Asn	Arg	Ser	Leu	Ser	Arg	Val	Arg
	690					695					700				
Val	Leu	Gly	Leu	Lys	Ala	His	Cys	Glu	Asn	Phe	Asn	Leu	Leu	Leu	Pro
705					710					715					720
Ser	Cys	Val	Glu	Asp	Ser	Val	Ile	Pro	Ile	Ile	Leu	Arg	Leu	Asn	Phe
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Thr	Leu	Val	Gly	Lys	Pro	Leu	Leu	Ala	Phe	Arg	Asn	Leu	Arg	Pro	Met
			740					745					750		
Leu	Ala	Ala	Leu	Ala	Gln	Arg	Tyr	Phe	Thr	Ala	Ser	Leu	Pro	Phe	Glu
		755					760					765			
Lys	Asn	Cys	Gly	Ala	Asp	His	Ile	Cys	Gln	Asp	Asn	Leu	Gly	Ile	Ser
	770					775					780				
Phe	Ser	Phe	Pro	Gly	Leu	Lys	Ser	Leu	Leu	Val	Gly	Ser	Asn	Leu	Glu
785					790					795					800
Leu	Asn	Ala	Glu	Val	Met	Val	Trp	Asn	Asp	Gly	Glu	Asp	Ser	Tyr	Gly
				805					810					815	
Thr	Thr	Ile	Thr	Phe	Ser	His	Pro	Ala	Gly	Leu	Ser	Tyr	Arg	Tyr	Val
			820					825					830		
Ala	Glu	Gly	Gln	Lys	Gln	Gly	Gln	Leu	Arg	Ser	Leu	His	Leu	Thr	Cys
		835					840					845			
Cys	Ser	Ala	Pro	Val	Gly	Ser	Gln	Gly	Thr	Trp	Ser	Thr	Ser	Cys	Arg
		850				855					860				
Ile	Asn	His	Leu	Ile	Phe	Arg	Gly	Gly	Ala	Gln	Ile	Thr	Phe	Leu	Ala
865					870					875					880
Thr	Phe	Asp	Val	Ser	Pro	Lys	Ala	Val	Gly	Leu	Asp	Arg	Leu	Leu	Leu
				885					890					895	
Ile	Ala	Asn	Val	Ser	Ser	Glu	Asn	Asn	Ile	Pro	Arg	Thr	Ser	Lys	Thr
			900					905					910		
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<210> 14
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<210> 16
<211> 14
<212> PRT
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<400> 16
Leu Tyr Asp Xaa Val Ala Ala Thr Gly Leu Xaa Gln Pro Ile
1 5 10

<210> 17
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<211> 21
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<220>
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<211> 1006
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tcaaccaaac aggaaggttg tatgactgtg tggctgccac tggccttgct aaccataacc 180
cctgcacaca ccccgagatg ctgtgaacat gtccctgggt ctgtccctgt cagccgccgc 240
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ctcagcagca tccaggagca gctgcaggag aagatctttg cactcgaagg aaccagtcg 960
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<210> 26
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<220>
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<210> 31

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<210>	36
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<213> Rattus rattus

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<222> (1)..(3453)

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Pro Ile Val Phe Arg Glu Asp Ala Ala Ser Phe Gly Gln Thr Val Val	
20 25 30	
cag ttt ggt gga tct cga ctc gtg gtg gga gcc cct ctg gag gcg gtg	144
Gln Phe Gly Gly Ser Arg Leu Val Val Gly Ala Pro Leu Glu Ala Val	
35 40 45	
gca gtc aac caa aca gga cgg ttg tat gac tgt gca cct gcc act ggc	192
Ala Val Asn Gln Thr Gly Arg Leu Tyr Asp Cys Ala Pro Ala Thr Gly	
50 55 60	
atg tgc cag ccc atc gta ctg cgc agt ccc cta gag gca gtg aac atg	240
Met Cys Gln Pro Ile Val Leu Arg Ser Pro Leu Glu Ala Val Asn Met	
65 70 75 80	
tcc ctg ggc ctg tct ctg gtg act gcc acc aat aac gcc cag ttg ctg	288
Ser Leu Gly Leu Ser Leu Val Thr Ala Thr Asn Asn Ala Gln Leu Leu	
85 90 95	
gct tgt ggt cca act gca cag aga gct tgt gtg aag aac atg tat gcg	336
Ala Cys Gly Pro Thr Ala Gln Arg Ala Cys Val Lys Asn Met Tyr Ala	
100 105 110	
aaa ggt tcc tgc ctc ctt ctc ggc tcc agc ttg cag ttc atc cag gca	384
Lys Gly Ser Cys Leu Leu Leu Gly Ser Ser Leu Gln Phe Ile Gln Ala	
115 120 125	
gtc cct gcc tcc atg cca gag tgt cca aga caa gag atg gac att gct	432
Val Pro Ala Ser Met Pro Glu Cys Pro Arg Gln Glu Met Asp Ile Ala	
130 135 140	
ttc ctg att gat ggt tct ggc agc att aac caa agg gac ttt gcc cag	480
Phe Leu Ile Asp Gly Ser Gly Ser Ile Asn Gln Arg Asp Phe Ala Gln	
145 150 155 160	
atg aag gac ttt gtc aaa gct ttg atg gga gag ttt gcg agc acc agc	528
Met Lys Asp Phe Val Lys Ala Leu Met Gly Glu Phe Ala Ser Thr Ser	
165 170 175	
acc ttg ttc tcc ctg atg caa tac tcg aac atc ctg aag acc cat ttt	576
Thr Leu Phe Ser Leu Met Gln Tyr Ser Asn Ile Leu Lys Thr His Phe	
180 185 190	
acc ttc act gaa ttc aag aac atc ctg gac cct cag agc ctg gtg gat	624
Thr Phe Thr Glu Phe Lys Asn Ile Leu Asp Pro Gln Ser Leu Val Asp	
195 200 205	

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ccc att gtc cag ctg caa ggc ctg acc tac aca gcc aca ggc atc cgg Pro Ile Val Gln Leu Gln Gly Leu Thr Tyr Thr Ala Thr Gly Ile Arg 210 215 220	672
aca gtg atg gaa gag cta ttt cat agc aag aat ggg tcc cgt aaa agt Thr Val Met Glu Glu Leu Phe His Ser Lys Asn Gly Ser Arg Lys Ser 225 230 235 240	720
gcc aag aag atc ctc ctt gtc atc aca gat ggg cag aaa tac aga gac Ala Lys Lys Ile Leu Leu Val Ile Thr Asp Gly Gln Lys Tyr Arg Asp 245 250 255	768
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att cgt tat gct att ggg gtg gga gat gcc ttc cag gag ccc act gcc Ile Arg Tyr Ala Ile Gly Val Gly Asp Ala Phe Gln Glu Pro Thr Ala 275 280 285	864
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ttc aag gta ggc aac ttt gca gca ctt cgc agc atc cag agg caa ctt Phe Lys Val Gly Asn Phe Ala Ala Leu Arg Ser Ile Gln Arg Gln Leu 305 310 315 320	960
cag gag aaa atc ttc gcc att gag gga act caa tca agg tca agt agt Gln Glu Lys Ile Phe Ala Ile Glu Gly Thr Gln Ser Arg Ser Ser Ser 325 330 335	1008
tcc ttt cag cac gag atg tca caa gaa ggt ttc agt tca gct ctc aca Ser Phe Gln His Glu Met Ser Gln Glu Gly Phe Ser Ser Ala Leu Thr 340 345 350	1056
tcg gat gga ccc gtt ctg ggg gcc gyg gga agc ttc agc tgg tcc gga Ser Asp Gly Pro Val Leu Gly Ala Xaa Gly Ser Phe Ser Trp Ser Gly 355 360 365	1104
ggt gcc ttc tta tat ccc cca aat acg aga ccc acc ttt atc aac atg Gly Ala Phe Leu Tyr Pro Pro Asn Thr Arg Pro Thr Phe Ile Asn Met 370 375 380	1152
tct cag gag aat gtg gac atg aga gac tcc tac ctg ggt tac tcc acc Ser Gln Glu Asn Val Asp Met Arg Asp Ser Tyr Leu Gly Tyr Ser Thr 385 390 395 400	1200
gca gtg gcc ttt tgg aag ggg gtt cac agc ctg atc ctg ggg gcc ccg Ala Val Ala Phe Trp Lys Gly Val His Ser Leu Ile Leu Gly Ala Pro 405 410 415	1248
cgt cac cag cac acg ggg aag gtt gtc atc ttt acc cag gaa gcc agg Arg His Gln His Thr Gly Lys Val Val Ile Phe Thr Gln Glu Ala Arg 420 425 430	1296
cat tgg agg ccc aag tct gaa gtc aga ggg aca cag atc ggc tcc tac His Trp Arg Pro Lys Ser Glu Val Arg Gly Thr Gln Ile Gly Ser Tyr 435 440 445	1344

09891947 062604

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Phe	Gly	Ala	Ser	Leu	Cys	Ser	Val	Asp	Val	Asp	Arg	Asp	Gly	Ser	Xaa	
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gac	ctg	gtc	ctg	atc	gga	gcc	ccc	cat	tac	tat	gag	cag	acc	cga	ggg	1440
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Gly	Gln	Val	Ser	Val	Xaa	Pro	Val	Pro	Gly	Val	Arg	Gly	Arg	Trp	Gln	
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Cys	Glu	Ala	Thr	Leu	His	Gly	Glu	Gln	Xaa	His	Pro	Trp	Gly	Arg	Phe	
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Tyr	Ile	Phe	His	Gly	Ala	Ser	Arg	Leu	Glu	Ile	Met	Pro	Ser	Pro	Ser	
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Gln	Arg	Val	Thr	Gly	Ser	Gln	Leu	Ser	Leu	Arg	Leu	Gln	Tyr	Phe	Gly	
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cag	tca	ttg	agt	ggg	ggt	cag	gac	ctt	aca	cag	gat	ggc	ctg	gtg	gac	1776
Gln	Ser	Leu	Ser	Gly	Gly	Gln	Asp	Leu	Thr	Gln	Asp	Gly	Leu	Val	Asp	
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Gln Asp Glu Leu Asp Phe Ile Leu Arg Gly Asn Leu Ser Phe Gly Trp	
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 Lys Ala Val Tyr Gln Cys Trp Glu Arg Thr Pro Thr Val Leu Glu Ala
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Lys Leu Leu Leu Pro Asp Cys Val Glu Asp Ala Val Ser Pro Ile Ile
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Leu Arg Leu Asn Phe Ser Leu Val Arg Asp Ser Ala Ser Pro Arg Asn
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Leu His Pro Val Leu Ala Val Gly Ser Gln Asp His Ile Thr Ala Ser
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Leu Pro Phe Glu Lys Asn Cys Lys Gln Glu Leu Leu Cys Glu Gly Asp
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Leu Gly Ile Ser Phe Asn Phe Ser Gly Leu Gln Val Leu Val Val Gly
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Tyr Arg Arg Val Thr Gly Thr Gln Gln Pro His Gln Tyr Pro Leu Arg
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Ser Cys Ser Ile Asn His Pro Ile Phe Arg Glu Gly Ala Lys Thr Thr
850 855 860

Phe Met Ile Thr Phe Asp Val Ser Tyr Lys Ala Phe Leu Gly Asp Arg
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Asn Lys Thr Ala Phe Gln Leu Glu Leu Pro Val Lys Tyr Thr Val Tyr
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Thr Leu Ile Ser Arg Gln Glu Asp Ser Thr Asn His Val Asn Phe Ser
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Ser Ser His Gly Gly Arg Arg Gln Glu Ala Ala His Arg Tyr Arg Val
930 935 940

Asn Asn Leu Ser Pro Leu Lys Leu Ala Val Arg Val Asn Phe Trp Val
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Ile Asp Gln Ser Asp Phe Thr Gln Met Lys Asp Phe Val Lys Ala Leu
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cct Pro 275	gaa Glu	gca Ala	gag Glu	aaa Lys	gct Ala 280	ggg Gly	atc Ile	att Ile	cgc Arg	tat Tyr 285	gct Ala	ata Ile	ggg Gly	gtg Val	gga Gly 290	921
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Pro Gly Val Arg Ser Arg Trp His Cys Gly Thr Thr Leu His Gly Glu	
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Gln Gly His Pro Trp Gly Arg Phe Gly Ala Leu Thr Val Leu Gly	
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Ser Gln Asp His Val Thr Ala Ser Phe Pro Phe Glu Lys Asn Cys Glu	
755 760 765 770	
ggg aac ctg ggc gtc agc ttc aac ttc tca ggc ctg cag gtc ttg gag	2409
Gly Asn Leu Gly Val Ser Phe Asn Phe Ser Gly Leu Gln Val Leu Glu	
775 780 785	
gta gga agc tcc cca gag ctg act gtg aca gta aca gtt tgg aat gag	2457
Val Gly Ser Ser Pro Glu Leu Thr Val Thr Val Thr Val Trp Asn Glu	
790 795 800	
ggt gag gac agc tat gga acc tta atc aag ttc tac tac cca gca gag	2505
Gly Glu Asp Ser Tyr Gly Thr Leu Ile Lys Phe Tyr Tyr Pro Ala Glu	
805 810 815	
cta tct tac cga cgg gtg aca aga gcc cag caa cct cat ccg tac cca	2553
Leu Ser Tyr Arg Arg Val Thr Arg Ala Gln Gln Pro His Pro Tyr Pro	
820 825 830	
cta cgc ctg gca tgt gag gct gag ccc acg ggc cag gag agc ctg agg	2601
Leu Arg Leu Ala Cys Glu Ala Glu Pro Thr Gly Gln Glu Ser Leu Arg	
835 840 845 850	
agc agc agc tgt agc atc aat cac ccc atc ttc cga gaa ggt gcc aag	2649
Ser Ser Ser Cys Ser Ile Asn His Pro Ile Phe Arg Glu Gly Ala Lys	
855 860 865	
gcc acc ttc atg atc aca ttt gat gtc tcc tac aag gcc ttc ctg gga	2697
Ala Thr Phe Met Ile Thr Phe Asp Val Ser Tyr Lys Ala Phe Leu Gly	
870 875 880	
gac agg ttg ctt ctg agg gcc agc gca agc agt gag aat aat aag cct	2745
Asp Arg Leu Leu Leu Arg Ala Ser Ala Ser Ser Glu Asn Asn Lys Pro	
885 890 895	
gaa acc agc aag act gcc ttc cag ctg gag ctt ccg gtg aag tac acg	2793
Glu Thr Ser Lys Thr Ala Phe Gln Leu Glu Leu Pro Val Lys Tyr Thr	
900 905 910	
gtc tat acc gtg atc agt agg cag gaa gat tct acc aag cat ttc aac	2841
Val Tyr Thr Val Ile Ser Arg Gln Glu Asp Ser Thr Lys His Phe Asn	
915 920 925 930	
ttc tca tct tcc cac ggg gag aga cag aaa gag gcc gaa cat cga tat	2889

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Phe	Ser	Ser	Ser	His	Gly	Glu	Arg	Gln	Lys	Glu	Ala	Glu	His	Arg	Tyr	
				935					940					945		
cg	gt	aat	aac	ctg	agt	cca	ttg	acg	ctg	gcc	atc	agc	gtt	aac	ttc	2937
Arg	Val	Asn	Asn	Leu	Ser	Pro	Leu	Thr	Leu	Ala	Ile	Ser	Val	Asn	Phe	
			950					955					960			
tgg	gtc	ccc	atc	ctt	ctg	aat	gg	gtg	gcc	gtg	tgg	gat	gtg	act	ctg	2985
Trp	Val	Pro	Ile	Leu	Leu	Asn	Gly	Val	Ala	Val	Trp	Asp	Val	Thr	Leu	
			965				970					975				
agg	agc	cca	gca	cag	gg	gtc	tcc	tgt	gtg	tca	cag	agg	gaa	cct	cct	3033
Arg	Ser	Pro	Ala	Gln	Gly	Val	Ser	Cys	Val	Ser	Gln	Arg	Glu	Pro	Pro	
			980			985					990					
caa	cat	tcc	gac	ctt	ctg	acc	cag	atc	caa	gga	cgc	tct	gtg	ctg	gac	3081
Gln	His	Ser	Asp	Leu	Leu	Thr	Gln	Ile	Gln	Gly	Arg	Ser	Val	Leu	Asp	
995				1000					1005					1010		
tgc	gcc	atc	gcc	gac	tgc	ctg	cac	ctc	cgc	tgt	gac	atc	ccc	tcc	ttg	3129
Cys	Ala	Ile	Ala	Asp	Cys	Leu	His	Leu	Arg	Cys	Asp	Ile	Pro	Ser	Leu	
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ggc	acc	ctg	gat	gag	ctt	gac	ttc	att	ctg	aag	ggc	aac	ctc	agc	ttc	3177
Gly	Thr	Leu	Asp	Glu	Leu	Asp	Phe	Ile	Leu	Lys	Gly	Asn	Leu	Ser	Phe	
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ggc	tgg	atc	agt	cag	aca	ttg	cag	aaa	aag	gtg	ttg	ctc	ctg	agt	gag	3225
Gly	Trp	Ile	Ser	Gln	Thr	Leu	Gln	Lys	Lys	Val	Leu	Leu	Leu	Ser	Glu	
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gct	gaa	atc	aca	ttc	aac	aca	tct	gtg	tat	tcc	cag	ctg	ccg	gga	cag	3273
Ala	Glu	Ile	Thr	Phe	Asn	Thr	Ser	Val	Tyr	Ser	Gln	Leu	Pro	Gly	Gln	
	1060					1065				1070						
gag	gca	ttt	ctg	aga	gcc	cag	gtg	tca	acg	atg	cta	gaa	gaa	tac	gtg	3321
Glu	Ala	Phe	Leu	Arg	Ala	Gln	Val	Ser	Thr	Met	Leu	Glu	Glu	Tyr	Val	
	1075			1080				1085						1090		
gtc	tat	gag	ccc	gtc	ttc	ctc	atg	gtg	ttc	agc	tca	gtg	gga	gg	ctg	3369
Val	Tyr	Glu	Pro	Val	Phe	Leu	Met	Val	Phe	Ser	Ser	Val	Gly	Gly	Leu	
			1095					1100					1105			
ctg	tta	ctg	gct	ctc	atc	act	gtg	gcg	ctg	tac	aag	ctt	ggc	ttc	ttc	3417
Leu	Leu	Leu	Ala	Leu	Ile	Thr	Val	Ala	Leu	Tyr	Lys	Leu	Gly	Phe	Phe	
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aaa	cg	cag	tat	aaa	gag	atg	ctg	gat	cta	cca	tct	gca	gat	cct	gac	3465
Lys	Arg	Gln	Tyr	Lys	Glu	Met	Leu	Asp	Leu	Pro	Ser	Ala	Asp	Pro	Asp	
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cca	gcc	ggc	cag	gca	gat	tcc	aac	cat	gag	act	cct	cca	cat	ctc	acg	3513
Pro	Ala	Gly	Gln	Ala	Asp	Ser	Asn	His	Glu	Thr	Pro	Pro	His	Leu	Thr	
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tcc	tag															3519
Ser																
1155																

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<213> Mus musculus

Met Val Arg Gly Val Val Ile Leu Leu Cys Gly Trp Ala Leu Ala Ser
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Asp Ala Ala Ser Phe Gly Gln Thr Val Val Gln Phe Gly Gly Ser Arg
35 40 45

Leu Val Val Gly Ala Pro Leu Glu Ala Val Ala Val Asn Gln Thr Gly
50 55 60

Gln Ser Ser Asp Cys Pro Pro Ala Thr Gly Val Cys Gln Pro Ile Leu
65 70 75 80

Leu His Ile Pro Leu Glu Ala Val Asn Met Ser Leu Gly Leu Ser Leu
85 90 95

Val Ala Asp Thr Asn Asn Ser Gln Leu Leu Ala Cys Gly Pro Thr Ala
100 105 110

Gln Arg Ala Cys Ala Lys Asn Met Tyr Ala Lys Gly Ser Cys Leu Leu
115 120 125

Leu Gly Ser Ser Leu Gln Phe Ile Gln Ala Ile Pro Ala Thr Met Pro
130 135 140

Glu Cys Pro Gly Gln Glu Met Asp Ile Ala Phe Leu Ile Asp Gly Ser
145 150 155 160

Gly Ser Ile Asp Gln Ser Asp Phe Thr Gln Met Lys Asp Phe Val Lys
165 170 175

Ala Leu Met Gly Gln Leu Ala Ser Thr Ser Thr Ser Phe Ser Leu Met
180 185 190

Gln Tyr Ser Asn Ile Leu Lys Thr His Phe Thr Phe Thr Glu Phe Lys
195 200 205

Ser Ser Leu Ser Pro Gln Ser Leu Val Asp Ala Ile Val Gln Leu Gln
210 215 220

Gly Leu Thr Tyr Thr Ala Ser Gly Ile Gln Lys Val Val Lys Glu Leu
225 230 235 240

Phe His Ser Lys Asn Gly Ala Arg Lys Ser Ala Lys Lys Ile Leu Ile
245 250 255

Val Ile Thr Asp Gly Gln Lys Phe Arg Asp Pro Leu Glu Tyr Arg His
260 265 270

Val Ile Pro Glu Ala Glu Lys Ala Gly Ile Ile Arg Tyr Ala Ile Gly
275 280 285

Val Gly Asp Ala Phe Arg Glu Pro Thr Ala Leu Gln Glu Leu Asn Thr
290 295 300

Ile	Gly	Ser	Ala	Pro	Ser	Gln	Asp	His	Val	Phe	Lys	Val	Gly	Asn	Phe	
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Val	Ala	Leu	Arg	Ser	Ile	Gln	Arg	Gln	Ile	Gln	Glu	Lys	Ile	Phe	Ala	
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Ile	Glu	Gly	Thr	Glu	Ser	Arg	Ser	Ser	Ser	Ser	Phe	Gln	His	Glu	Met	
			340					345					350			
Ser	Gln	Glu	Gly	Phe	Ser	Ser	Ala	Leu	Ser	Met	Asp	Gly	Pro	Val	Leu	
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Gly	Ala	Val	Gly	Gly	Phe	Ser	Trp	Ser	Gly	Gly	Ala	Phe	Leu	Tyr	Pro	
	370					375					380					
Ser	Asn	Met	Arg	Ser	Thr	Phe	Ile	Asn	Met	Ser	Gln	Glu	Asn	Glu	Asp	
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Met	Arg	Asp	Ala	Tyr	Leu	Gly	Tyr	Ser	Thr	Ala	Leu	Ala	Phe	Trp	Lys	
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Gly	Val	His	Ser	Leu	Ile	Leu	Gly	Ala	Pro	Arg	His	Gln	His	Thr	Gly	
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Lys	Val	Val	Ile	Phe	Thr	Gln	Glu	Ser	Arg	His	Trp	Arg	Pro	Lys	Ser	
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Glu	Val	Arg	Gly	Thr	Gln	Ile	Gly	Ser	Tyr	Phe	Gly	Ala	Ser	Leu	Cys	
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Ser	Val	Asp	Met	Asp	Arg	Asp	Gly	Ser	Thr	Asp	Leu	Val	Leu	Ile	Gly	
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Val	Pro	His	Tyr	Tyr	Glu	His	Thr	Arg	Gly	Gly	Gln	Val	Ser	Val	Cys	
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Pro	Met	Pro	Gly	Val	Arg	Ser	Arg	Trp	His	Cys	Gly	Thr	Thr	Leu	His	
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Gly	Glu	Gln	Gly	His	Pro	Trp	Gly	Arg	Phe	Gly	Ala	Ala	Leu	Thr	Val	
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Leu	Gly	Asp	Val	Asn	Gly	Asp	Ser	Leu	Ala	Asp	Val	Ala	Ile	Gly	Ala	
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Pro	Gly	Glu	Glu	Glu	Asn	Arg	Gly	Ala	Val	Tyr	Ile	Phe	His	Gly	Ala	
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Ser	Arg	Gln	Asp	Ile	Ala	Pro	Ser	Pro	Ser	Gln	Arg	Val	Thr	Gly	Ser	
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Gln	Leu	Phe	Leu	Arg	Leu	Gln	Tyr	Phe	Gly	Gln	Ser	Leu	Ser	Gly	Gly	
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Gln	Asp	Leu	Thr	Gln	Asp	Gly	Leu	Val	Asp	Leu	Ala	Val	Gly	Ala	Gln	
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Gly	His	Val	Leu	Leu	Leu	Arg	Ser	Leu	Pro	Leu	Leu	Lys	Val	Gly	Ile	
	610					615					620					

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Ser 625	Ile	Arg	Phe	Ala	Pro 630	Ser	Glu	Val	Ala	Lys 635	Thr	Val	Tyr	Gln	Cys 640
Trp	Gly	Arg	Thr	Pro 645	Thr	Val	Leu	Glu	Ala 650	Gly	Glu	Ala	Thr	Val 655	Cys
Leu	Thr	Val	Arg 660	Lys	Gly	Ser	Pro	Asp 665	Leu	Leu	Gly	Asp	Val 670	Gln	Ser
Ser	Val	Arg 675	Tyr	Asp	Leu	Ala	Leu 680	Asp	Pro	Gly	Arg	Leu 685	Ile	Ser	Arg
Ala	Ile 690	Phe	Asp	Glu	Thr	Lys 695	Asn	Cys	Thr	Leu	Thr 700	Arg	Arg	Lys	Thr
Leu 705	Gly	Leu	Gly	Asp	His 710	Cys	Glu	Thr	Met	Lys 715	Leu	Leu	Leu	Pro	Asp 720
Cys	Val	Glu	Asp 725	Ala	Val	Thr	Pro	Ile	Ile 730	Leu	Arg	Leu	Asn	Leu 735	Ser
Leu	Ala	Gly	Asp 740	Ser	Ala	Pro	Ser	Arg 745	Asn	Leu	Arg	Pro	Val 750	Leu	Ala
Val	Gly 755	Ser	Gln	Asp	His	Val	Thr 760	Ala	Ser	Phe	Pro	Phe 765	Glu	Lys	Asn
Cys 770	Glu	Gly	Asn	Leu	Gly 775	Val	Ser	Phe	Asn	Phe 780	Ser	Gly	Leu	Gln	Val
Leu 785	Glu	Val	Gly	Ser	Ser 790	Pro	Glu	Leu	Thr	Val 795	Thr	Val	Thr	Val	Trp 800
Asn	Glu	Gly	Glu 805	Asp	Ser	Tyr	Gly	Thr	Leu 810	Ile	Lys	Phe	Tyr	Tyr 815	Pro
Ala	Glu	Leu	Ser 820	Tyr	Arg	Arg	Val	Thr 825	Arg	Ala	Gln	Gln	Pro 830	His	Pro
Tyr	Pro 835	Leu	Arg	Leu	Ala	Cys	Glu 840	Ala	Glu	Pro	Thr	Gly 845	Gln	Glu	Ser
Leu 850	Arg	Ser	Ser	Ser	Cys	Ser 855	Ile	Asn	His	Pro	Ile 860	Phe	Arg	Glu	Gly
Ala 865	Lys	Ala	Thr	Phe	Met 870	Ile	Thr	Phe	Asp	Val 875	Ser	Tyr	Lys	Ala	Phe 880
Leu	Gly	Asp	Arg 885	Leu	Leu	Leu	Arg	Ala	Ser 890	Ala	Ser	Ser	Glu	Asn 895	Asn
Lys	Pro	Glu 900	Thr	Ser	Lys	Thr	Ala	Phe 905	Gln	Leu	Glu	Leu	Pro 910	Val	Lys
Tyr	Thr 915	Val	Tyr	Thr	Val	Ile	Ser 920	Arg	Gln	Glu	Asp	Ser 925	Thr	Lys	His
Phe	Asn 930	Phe	Ser	Ser	Ser	His 935	Gly	Glu	Arg	Gln	Lys 940	Glu	Ala	Glu	His

Arg Tyr Arg Val Asn Asn Leu Ser Pro Leu Thr Leu Ala Ile Ser Val
945 950 955 960

Asn Phe Trp Val Pro Ile Leu Leu Asn Gly Val Ala Val Trp Asp Val
965 970 975

Thr Leu Arg Ser Pro Ala Gln Gly Val Ser Cys Val Ser Gln Arg Glu
980 985 990

Pro Pro Gln His Ser Asp Leu Leu Thr Gln Ile Gln Gly Arg Ser Val
995 1000 1005

Leu Asp Cys Ala Ile Ala Asp Cys Leu His Leu Arg Cys Asp Ile Pro
1010 1015 1020

Ser Leu Gly Thr Leu Asp Glu Leu Asp Phe Ile Leu Lys Gly Asn Leu
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Ser Phe Gly Trp Ile Ser Gln Thr Leu Gln Lys Lys Val Leu Leu Leu
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Ser Glu Ala Glu Ile Thr Phe Asn Thr Ser Val Tyr Ser Gln Leu Pro
1060 1065 1070

Gly Gln Glu Ala Phe Leu Arg Ala Gln Val Ser Thr Met Leu Glu Glu
1075 1080 1085

Tyr Val Val Tyr Glu Pro Val Phe Leu Met Val Phe Ser Ser Val Gly
1090 1095 1100

Gly Leu Leu Leu Leu Ala Leu Ile Thr Val Ala Leu Tyr Lys Leu Gly
1105 1110 1115 1120

Phe Phe Lys Arg Gln Tyr Lys Glu Met Leu Asp Leu Pro Ser Ala Asp
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Pro Asp Pro Ala Gly Gln Ala Asp Ser Asn His Glu Thr Pro Pro His
1140 1145 1150

Leu Thr Ser
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<210> 48
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gat	gca	gcc	agc	ttc	gga	cag	act	gtg	gtg	cag	ttt	ggt	gga	tct	cga	144
Asp	Ala	Ala	Ser	Phe	Gly	Gln	Thr	Val	Val	Gln	Phe	Gly	Gly	Ser	Arg	
	35						40					45				
ctc	gtg	gtg	gga	gcc	cct	ctg	gag	gcg	gtg	gca	gtc	aac	caa	aca	gga	192
Leu	Val	Val	Gly	Ala	Pro	Leu	Glu	Ala	Val	Ala	Val	Asn	Gln	Thr	Gly	
	50					55					60					
cag	tcg	tct	gac	tgt	ccg	cct	gcc	act	ggc	gtg	tgc	cag	ccc	atc	tta	240
Gln	Ser	Ser	Asp	Cys	Pro	Pro	Ala	Thr	Gly	Val	Cys	Gln	Pro	Ile	Leu	
	65				70				75						80	
ctg	cac	att	ccc	cta	gag	gca	gtg	aac	atg	tcc	ctg	ggc	ctg	tct	ctg	288
Leu	His	Ile	Pro	Leu	Glu	Ala	Val	Asn	Met	Ser	Leu	Gly	Leu	Ser	Leu	
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gtg	gct	gac	acc	aat	aac	tcc	cag	ttg	ctg	gct	tgt	ggt	cca	act	gca	336
Val	Ala	Asp	Thr	Asn	Asn	Ser	Gln	Leu	Leu	Ala	Cys	Gly	Pro	Thr	Ala	
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cag	aga	gct	tgt	gca	aag	aac	atg	tat	gca	aaa	ggt	tcc	tgc	ctc	ctt	384
Gln	Arg	Ala	Cys	Ala	Lys	Asn	Met	Tyr	Ala	Lys	Gly	Ser	Cys	Leu	Leu	
		115					120					125				
ctg	ggc	tcc	agc	ttg	cag	ttc	atc	cag	gca	atc	cct	gct	acc	atg	cca	432
Leu	Gly	Ser	Ser	Leu	Gln	Phe	Ile	Gln	Ala	Ile	Pro	Ala	Thr	Met	Pro	
	130					135					140					
gag	tgt	cca	gga	caa	gag	atg	gac	att	gct	ttc	ctg	att	gat	ggc	tcc	480
Glu	Cys	Pro	Gly	Gln	Glu	Met	Asp	Ile	Ala	Phe	Leu	Ile	Asp	Gly	Ser	
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ggc	agc	att	gat	caa	agt	gac	ttt	acc	cag	atg	aag	gac	ttc	gtc	aaa	528
Gly	Ser	Ile	Asp	Gln	Ser	Asp	Phe	Thr	Gln	Met	Lys	Asp	Phe	Val	Lys	
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gct	ttg	atg	ggc	cag	ttg	gcg	agc	acc	agc	acc	tcg	ttc	tcc	ctg	atg	576
Ala	Leu	Met	Gly	Gln	Leu	Ala	Ser	Thr	Ser	Thr	Ser	Phe	Ser	Leu	Met	
			180					185						190		
caa	tac	tca	aac	atc	ctg	aag	act	cat	ttt	acc	ttc	acg	gaa	ttc	aag	624
Gln	Tyr	Ser	Asn	Ile	Leu	Lys	Thr	His	Phe	Thr	Phe	Thr	Glu	Phe	Lys	
		195					200					205				
agc	agc	ctg	agc	cct	cag	agc	ctg	gtg	gat	gcc	atc	gtc	cag	ctc	caa	672
Ser	Ser	Leu	Ser	Pro	Gln	Ser	Leu	Val	Asp	Ala	Ile	Val	Gln	Leu	Gln	
	210					215					220					
ggc	ctg	acg	tac	aca	gcc	tcg	ggc	atc	cag	aaa	gtg	gtg	aaa	gag	cta	720
Gly	Leu	Thr	Tyr	Thr	Ala	Ser	Gly	Ile	Gln	Lys	Val	Val	Lys	Glu	Leu	
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Phe	His	Ser	Lys	Asn	Gly	Ala	Arg	Lys	Ser	Ala	Lys	Lys	Ile	Leu	Ile	
				245					250					255		
gtc	atc	aca	gat	ggg	cag	aaa	ttc	aga	gac	ccc	ctg	gag	tat	aga	cat	816
Val	Ile	Thr	Asp	Gly	Gln	Lys	Phe	Arg	Asp	Pro	Leu	Glu	Tyr	Arg	His	
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gtc atc cct gaa gca gag aaa gct ggg atc att cgc tat gct ata ggg	864
Val Ile Pro Glu Ala Glu Lys Ala Gly Ile Ile Arg Tyr Ala Ile Gly	
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Val Gly Asp Ala Phe Arg Glu Pro Thr Ala Leu Gln Glu Leu Asn Thr	
290 295 300	
att ggc tca gct ccc tcg cag gac cac gtg ttc aag gtg ggc aat ttt	960
Ile Gly Ser Ala Pro Ser Gln Asp His Val Phe Lys Val Gly Asn Phe	
305 310 315 320	
gta gca ctt cgc agc atc cag cgg caa att cag gag aaa atc ttt gcc	1008
Val Ala Leu Arg Ser Ile Gln Arg Gln Ile Gln Glu Lys Ile Phe Ala	
325 330 335	
att gaa gga acc gaa tca agg tca agt agt tcc ttt cag cac gag atg	1056
Ile Glu Gly Thr Glu Ser Arg Ser Ser Ser Phe Gln His Glu Met	
340 345 350	
tca caa gaa ggt ttc agc tca gct ctc tca atg gat gga cca gtt ctg	1104
Ser Gln Glu Gly Phe Ser Ser Ala Leu Ser Met Asp Gly Pro Val Leu	
355 360 365	
ggg gct gtg gga ggc ttc agc tgg tct gga ggt gcc ttc ttg tac ccc	1152
Gly Ala Val Gly Gly Phe Ser Trp Ser Gly Gly Ala Phe Leu Tyr Pro	
370 375 380	
tca aat atg aga tcc acc ttc atc aac atg tct cag gag aac gag gat	1200
Ser Asn Met Arg Ser Thr Phe Ile Asn Met Ser Gln Glu Asn Glu Asp	
385 390 395 400	
atg agg gac gct tac ctg ggt tac tcc acc gca ctg gcc ttt tgg aag	1248
Met Arg Asp Ala Tyr Leu Gly Tyr Ser Thr Ala Leu Ala Phe Trp Lys	
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Gly Val His Ser Leu Ile Leu Gly Ala Pro Arg His Gln His Thr Gly	
420 425 430	
aag gtt gtc atc ttt acc cag gaa tcc agg cac tgg agg ccc aag tct	1344
Lys Val Val Ile Phe Thr Gln Glu Ser Arg His Trp Arg Pro Lys Ser	
435 440 445	
gaa gtc aga ggg aca cag atc ggc tcc tac ttt ggg gca tct ctc tgt	1392
Glu Val Arg Gly Thr Gln Ile Gly Ser Tyr Phe Gly Ala Ser Leu Cys	
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Ser Val Asp Met Asp Arg Asp Gly Ser Thr Asp Leu Val Leu Ile Gly	
465 470 475 480	
gtc ccc cat tac tat gag cac acc cga ggg ggg cag gtg tcg gtg tgc	1488
Val Pro His Tyr Tyr Glu His Thr Arg Gly Gly Gln Val Ser Val Cys	
485 490 495	
ccc atg cct ggt gtg agg agc agg tgg cat tgt ggg acc acc ctc cat	1536
Pro Met Pro Gly Val Arg Ser Arg Trp His Cys Gly Thr Thr Leu His	
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ccc gga gag gag gag aac aga ggt gct gtc tac ata ttt cat gga gcc Pro Gly Glu Glu Glu Asn Arg Gly Ala Val Tyr Ile Phe His Gly Ala 545 550 555 560	1680
tcg aga cag gac atc gct ccc tcg cct agc cag cgg gtc act ggc tcc Ser Arg Gln Asp Ile Ala Pro Ser Pro Ser Gln Arg Val Thr Gly Ser 565 570 575	1728
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ctc act gtc cgc aaa ggt tca cct gac ctg tta ggt gat gtc caa agc Leu Thr Val Arg Lys Gly Ser Pro Asp Leu Leu Gly Asp Val Gln Ser 660 665 670	2016
tct gtc agg tat gat ctg gcg ttg gat ccg ggc cgt ctg att tct cgt Ser Val Arg Tyr Asp Leu Ala Leu Asp Pro Gly Arg Leu Ile Ser Arg 675 680 685	2064
gcc att ttt gat gag acg aag aac tgc act ttg acc cga agg aag act Ala Ile Phe Asp Glu Thr Lys Asn Cys Thr Leu Thr Arg Arg Lys Thr 690 695 700	2112
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tgt aag cag gag ctc ctg tgt gag ggg aac ctg ggc gtc agc ttc aac	2352
Cys Lys Gln Glu Leu Leu Cys Glu Gly Asn Leu Gly Val Ser Phe Asn	
770 775 780	
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Phe Ser Gly Leu Gln Val Leu Glu Val Gly Ser Ser Pro Glu Leu Thr	
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Val Thr Val Thr Val Trp Asn Glu Gly Glu Asp Ser Tyr Gly Thr Leu	
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Leu Arg Cys Asp Ile Pro Ser Leu Gly Thr Leu Asp Glu Leu Asp Phe
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att ctg aag ggc aac ctc agc ttc ggc tgg atc agt cag aca ttg cag 3168
Ile Leu Lys Gly Asn Leu Ser Phe Gly Trp Ile Ser Gln Thr Leu Gln
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Val Tyr Ser Gln Leu Pro Gly Gln Glu Ala Phe Leu Arg Ala Gln Val
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Ser Thr Met Leu Glu Glu Tyr Val Val Tyr Glu Pro Val Phe Leu Met
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1125 1130 1135

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Asp Leu Pro Ser Ala Asp Pro Asp Pro Ala Gly Gln Ala Asp Ser Asn
1140 1145 1150

cat gag act cct cca cat ctc acg tcc taggaatcta ctttcctgta 3503
His Glu Thr Pro Pro His Leu Thr Ser
1155 1160

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Gln 65	Ser	Ser	Asp	Cys	Pro 70	Pro	Ala	Thr	Gly	Val 75	Cys	Gln	Pro	Ile	Leu 80
Leu	His	Ile	Pro	Leu 85	Glu	Ala	Val	Asn	Met 90	Ser	Leu	Gly	Leu	Ser 95	Leu
Val	Ala	Asp	Thr 100	Asn	Asn	Ser	Gln	Leu 105	Leu	Ala	Cys	Gly	Pro 110	Thr	Ala
Gln	Arg	Ala 115	Cys	Ala	Lys	Asn	Met 120	Tyr	Ala	Lys	Gly	Ser 125	Cys	Leu	Leu
Leu	Gly 130	Ser	Ser	Leu	Gln	Phe 135	Ile	Gln	Ala	Ile	Pro 140	Ala	Thr	Met	Pro
Glu 145	Cys	Pro	Gly	Gln	Glu 150	Met	Asp	Ile	Ala	Phe 155	Leu	Ile	Asp	Gly	Ser 160
Gly	Ser	Ile	Asp	Gln 165	Ser	Asp	Phe	Thr	Gln 170	Met	Lys	Asp	Phe	Val 175	Lys
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Gln	Tyr	Ser 195	Asn	Ile	Leu	Lys	Thr 200	His	Phe	Thr	Phe	Thr 205	Glu	Phe	Lys
Ser	Ser 210	Leu	Ser	Pro	Gln	Ser 215	Leu	Val	Asp	Ala	Ile 220	Val	Gln	Leu	Gln
Gly 225	Leu	Thr	Tyr	Thr 230	Ala	Ser	Gly	Ile	Gln	Lys 235	Val	Val	Lys	Glu	Leu 240
Phe	His	Ser	Lys	Asn 245	Gly	Ala	Arg	Lys	Ser 250	Ala	Lys	Lys	Ile	Leu 255	Ile
Val	Ile	Thr	Asp 260	Gly	Gln	Lys	Phe	Arg 265	Asp	Pro	Leu	Glu	Tyr 270	Arg	His
Val	Ile	Pro 275	Glu	Ala	Glu	Lys	Ala 280	Gly	Ile	Ile	Arg	Tyr 285	Ala	Ile	Gly
Val	Gly 290	Asp	Ala	Phe	Arg	Glu 295	Pro	Thr	Ala	Leu	Gln 300	Glu	Leu	Asn	Thr
Ile 305	Gly	Ser	Ala	Pro	Ser	Gln 310	Asp	His	Val	Phe 315	Lys	Val	Gly	Asn	Phe 320
Val	Ala	Leu	Arg	Ser 325	Ile	Gln	Arg	Gln	Ile 330	Gln	Glu	Lys	Ile	Phe 335	Ala

Ile Glu Gly Thr Glu Ser Arg Ser Ser Ser Ser Phe Gln His Glu Met
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Ser Gln Glu Gly Phe Ser Ser Ala Leu Ser Met Asp Gly Pro Val Leu
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Gly Ala Val Gly Gly Phe Ser Trp Ser Gly Gly Ala Phe Leu Tyr Pro
370 375 380

Ser Asn Met Arg Ser Thr Phe Ile Asn Met Ser Gln Glu Asn Glu Asp
385 390 395 400

Met Arg Asp Ala Tyr Leu Gly Tyr Ser Thr Ala Leu Ala Phe Trp Lys
405 410 415

Gly Val His Ser Leu Ile Leu Gly Ala Pro Arg His Gln His Thr Gly
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Lys Val Val Ile Phe Thr Gln Glu Ser Arg His Trp Arg Pro Lys Ser
435 440 445

Glu Val Arg Gly Thr Gln Ile Gly Ser Tyr Phe Gly Ala Ser Leu Cys
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Ser Val Asp Met Asp Arg Asp Gly Ser Thr Asp Leu Val Leu Ile Gly
465 470 475 480

Val Pro His Tyr Tyr Glu His Thr Arg Gly Gly Gln Val Ser Val Cys
485 490 495

Pro Met Pro Gly Val Arg Ser Arg Trp His Cys Gly Thr Thr Leu His
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Gly Glu Gln Gly His Pro Trp Gly Arg Phe Gly Ala Ala Leu Thr Val
515 520 525

Leu Gly Asp Val Asn Gly Asp Ser Leu Ala Asp Val Ala Ile Gly Ala
530 535 540

Pro Gly Glu Glu Glu Asn Arg Gly Ala Val Tyr Ile Phe His Gly Ala
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Ser Arg Gln Asp Ile Ala Pro Ser Pro Ser Gln Arg Val Thr Gly Ser
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Gln Leu Phe Leu Arg Leu Gln Tyr Phe Gly Gln Ser Leu Ser Gly Gly
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Gln Asp Leu Thr Gln Asp Gly Leu Val Asp Leu Ala Val Gly Ala Gln
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Gly His Val Leu Leu Leu Arg Ser Leu Pro Leu Leu Lys Val Gly Ile
610 615 620

Ser Ile Arg Phe Ala Pro Ser Glu Val Ala Lys Thr Val Tyr Gln Cys
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Trp Gly Arg Thr Pro Thr Val Leu Glu Ala Gly Glu Ala Thr Val Cys
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Leu Thr Val Arg Lys Gly Ser Pro Asp Leu Leu Gly Asp Val Gln Ser
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Ala Ile Phe Asp Glu Thr Lys Asn Cys Thr Leu Thr Arg Arg Lys Thr
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Cys Val Glu Asp Ala Val Thr Pro Ile Ile Leu Arg Leu Asn Leu Ser
725 730 735

Leu Ala Gly Asp Ser Ala Pro Ser Arg Asn Leu Arg Pro Val Leu Ala
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Val Gly Ser Gln Asp His Val Thr Ala Ser Phe Pro Phe Glu Lys Asn
755 760 765

Cys Lys Gln Glu Leu Leu Cys Glu Gly Asn Leu Gly Val Ser Phe Asn
770 775 780

Phe Ser Gly Leu Gln Val Leu Glu Val Gly Ser Ser Pro Glu Leu Thr
785 790 795 800

Val Thr Val Thr Val Trp Asn Glu Gly Glu Asp Ser Tyr Gly Thr Leu
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Ile Lys Phe Tyr Tyr Pro Ala Glu Leu Ser Tyr Arg Arg Val Thr Arg
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Ala Gln Gln Pro His Pro Tyr Pro Leu Arg Leu Ala Cys Glu Ala Glu
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Pro Thr Gly Gln Glu Ser Leu Arg Ser Ser Ser Cys Ser Ile Asn His
850 855 860

Pro Ile Phe Arg Glu Gly Ala Lys Ala Thr Phe Met Ile Thr Phe Asp
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Val Ser Tyr Lys Ala Phe Leu Gly Asp Arg Leu Leu Leu Arg Ala Ser
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Ala Ser Ser Glu Asn Asn Lys Pro Glu Thr Ser Lys Thr Ala Phe Gln
900 905 910

Leu Glu Leu Pro Val Lys Tyr Thr Val Tyr Thr Val Ile Ser Arg Gln
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Glu Asp Ser Thr Lys His Phe Asn Phe Ser Ser Ser His Gly Glu Arg
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Gln Lys Glu Ala Glu His Arg Tyr Arg Val Asn Asn Leu Ser Pro Leu
945 950 955 960

Thr Leu Ala Ile Ser Val Asn Phe Trp Val Pro Ile Leu Leu Asn Gly
965 970 975

Val Ala Val Trp Asp Val Thr Leu Arg Ser Pro Ala Gln Gly Val Ser
980 985 990

Cys Val Ser Gln Arg Glu Pro Pro Gln His Ser Asp Leu Leu Thr Gln
995 1000 1005

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Ile Gln Gly Arg Ser Val Leu Asp Cys Ala Ile Ala Asp Cys Leu His
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Leu Arg Cys Asp Ile Pro Ser Leu Gly Thr Leu Asp Glu Leu Asp Phe
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Ile Leu Lys Gly Asn Leu Ser Phe Gly Trp Ile Ser Gln Thr Leu Gln
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Ser Thr Met Leu Glu Glu Tyr Val Val Tyr Glu Pro Val Phe Leu Met
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Val Phe Ser Ser Val Gly Gly Leu Leu Leu Leu Ala Leu Ile Thr Val
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Ala Leu Tyr Lys Leu Gly Phe Phe Lys Arg Gln Tyr Lys Glu Met Leu
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Val Ile Leu Leu Cys Gly Trp Val Leu Ala Ser Cys His Gly Ser Asn
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gga Gly	cag Gln 40	act Thr	gtg Val	gtg Val	cag Gln	ttt Phe	ggt Gly 45	gga Gly	tct Ser	cga Arg	ctc Leu	gtg Val 50	gtg Val	gga Gly	gcc Ala	198
cct Pro 55	ctg Leu	gag Glu	gcg Ala	gtg Val	gca Ala	gtc Val 60	aac Asn	caa Gln	aca Thr	gga Gly 65	cgg Arg	ttg Leu	tat Tyr	gac Asp	tgt Cys	246
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Leu Ala Leu Asp Pro Gly Arg Leu Ile Ser Arg Ala Ile Phe Asp Glu	
680 685 690	
act aag aac tgc act ttg acg gga agg aag act ctg ggg ctt ggt gat	2166
Thr Lys Asn Cys Thr Leu Thr Gly Arg Lys Thr Leu Gly Leu Gly Asp	
695 700 705	
cac tgc gaa aca gtg aag ctg ctt ttg ccg gac tgt gtg gaa gat gca	2214
His Cys Glu Thr Val Lys Leu Leu Leu Pro Asp Cys Val Glu Asp Ala	
710 715 720 725	
gtg agc cct atc atc ctg cgc ctc aac ttt tcc ctg gtg aga gac tct	2262
Val Ser Pro Ile Ile Leu Arg Leu Asn Phe Ser Leu Val Arg Asp Ser	
730 735 740	

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gct tca ccc agg aac ctg cat cct gtg ctg gct gtg ggc tca caa gac	2310
Ala Ser Pro Arg Asn Leu His Pro Val Leu Ala Val Gly Ser Gln Asp	
745 750 755	
cac ata act gct tct ctg ccg ttt gag aag aac tgt aag caa gaa ctc	2358
His Ile Thr Ala Ser Leu Pro Phe Glu Lys Asn Cys Lys Gln Glu Leu	
760 765 770	
ctg tgt gag ggg gac ctg ggc atc agc ttt aac ttc tca ggc ctg cag	2406
Leu Cys Glu Gly Asp Leu Gly Ser Ile Ser Phe Asn Phe Ser Gly Leu Gln	
775 780 785	
gtc ttg gtg gtg gga ggc tcc cca gag ctc act gtg aca gtc act gtg	2454
Val Leu Val Val Gly Gly Ser Pro Glu Leu Thr Val Thr Val Thr Val	
790 795 800 805	
tgg aat gag ggt gag gac agc tat gga act tta gtc aag ttc tac tac	2502
Trp Asn Glu Gly Glu Asp Ser Tyr Gly Thr Leu Val Lys Phe Tyr Tyr	
810 815 820	
cca gca ggg cta tct tac cga cgg gta aca ggg act cag caa cct cat	2550
Pro Ala Gly Leu Ser Tyr Arg Arg Val Thr Gly Thr Gln Gln Pro His	
825 830 835	
cag tac cca cta cgc ttg gcc tgt gag gct gag ccc gct gcc cag gag	2598
Gln Tyr Pro Leu Arg Leu Ala Cys Glu Ala Glu Pro Ala Ala Gln Glu	
840 845 850	
gac ctg agg agc agc agc tgt agc att aat cac ccc atc ttc cga gaa	2646
Asp Leu Arg Ser Ser Ser Cys Ser Ile Asn His Pro Ile Phe Arg Glu	
855 860 865	
ggt gca aag acc acc ttc atg atc aca ttc gat gtc tcc tac aag gcc	2694
Gly Ala Lys Thr Thr Phe Met Ile Thr Phe Asp Val Ser Tyr Lys Ala	
870 875 880 885	
ttc cta gga gac agg ttg ctt ctg agg gcc aaa gcc agc agt gag aat	2742
Phe Leu Gly Asp Arg Leu Leu Leu Arg Ala Lys Ala Ser Ser Glu Asn	
890 895 900	
aat aag cct gat acc aac aag act gcc ttc cag ctg gag ctc cca gtg	2790
Asn Lys Pro Asp Thr Asn Lys Thr Ala Phe Gln Leu Glu Leu Pro Val	
905 910 915	
aag tac acc gtc tat acc ctg atc agt agg caa gaa gat tcc acc aac	2838
Lys Tyr Thr Val Tyr Thr Leu Ile Ser Arg Gln Glu Asp Ser Thr Asn	
920 925 930	
cat gtc aac ttt tca tct tcc cac ggg ggg aga agg caa gaa gcc gca	2886
His Val Asn Phe Ser Ser Ser His Gly Gly Arg Arg Gln Glu Ala Ala	
935 940 945	
cat cgc tat cgt gtg aat aac ctg agt cca ctg aag ctg gcc gtc aga	2934
His Arg Tyr Arg Val Asn Asn Leu Ser Pro Leu Lys Leu Ala Val Arg	
950 955 960 965	
gtt aac ttc tgg gtc cct gtc ctt ctg aac ggt gtg gct gtg tgg gac	2982
Val Asn Phe Trp Val Pro Val Leu Leu Asn Gly Val Ala Val Trp Asp	
970 975 980	

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gtg act ctg agc agc cca gca cag ggt gtc tcc tgc gtg tcc cag atg	3030
Val Thr Leu Ser Ser Pro Ala Gln Gly Val Ser Cys Val Ser Gln Met	
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aaa cct cct cag aat ccc gac ttt ctg acc cag att cag aga cgt tct	3078
Lys Pro Pro Gln Asn Pro Asp Phe Leu Thr Gln Ile Gln Arg Arg Ser	
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Val Leu Asp Cys Ser Ile Ala Asp Cys Leu His Phe Arg Cys Asp Ile	
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ccc tcc ttg gac atc cag gat gaa ctt gac ttc att ctg agg ggc aac	3174
Pro Ser Leu Asp Ile Gln Asp Glu Leu Asp Phe Ile Leu Arg Gly Asn	
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ctc agc ttc ggc tgg gtc agt cag aca ttg cag gaa aag gtg ttg ctt	3222
Leu Ser Phe Gly Trp Val Ser Gln Thr Leu Gln Glu Lys Val Leu Leu	
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Val Ser Glu Ala Glu Ile Thr Phe Asp Thr Ser Val Tyr Ser Gln Leu	
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cca gga cag gag gca ttt ctg aga gcc cag gtg gag aca acg tta gaa	3318
Pro Gly Gln Glu Ala Phe Leu Arg Ala Gln Val Glu Thr Thr Leu Glu	
1080 1085 1090	
gaa tac gtg gtc tat gag ccc atc ttc ctc gtg gcg ggc agc tcg gtg	3366
Glu Tyr Val Val Tyr Glu Pro Ile Phe Leu Val Ala Gly Ser Ser Val	
1095 1100 1105	
gga ggt ctg ctg tta ctg gct ctc atc aca gtg gta ctg tac aag ctt	3414
Gly Gly Leu Leu Leu Leu Ala Leu Ile Thr Val Val Leu Tyr Lys Leu	
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ggc ttc tyc aaa cgt cag tac aaa gaa atg ctg gac ggc aag gct gca	3462
Gly Phe Xaa Lys Arg Gln Tyr Lys Glu Met Leu Asp Gly Lys Ala Ala	
1130 1135 1140	
gat cct gtc aca gcc ggc cag gca gat ttc ggc tgt gag act cct cca	3510
Asp Pro Val Thr Ala Gly Gln Ala Asp Phe Gly Cys Glu Thr Pro Pro	
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tat ctc gtg agc taggaatcca ctctcctgcc tatctctgca atgaagattg	3562
Tyr Leu Val Ser	
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 <213> Rattus rattus

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Asp	Ala	Ala	Ser	Phe	Gly	Gln	Thr	Val	Val	Gln	Phe	Gly	Gly	Ser	Arg	35	40	45
Leu	Val	Val	Gly	Ala	Pro	Leu	Glu	Ala	Val	Ala	Val	Asn	Gln	Thr	Gly	50	55	60
Arg	Leu	Tyr	Asp	Cys	Ala	Pro	Ala	Thr	Gly	Met	Cys	Gln	Pro	Ile	Val	65	70	75
Leu	Arg	Ser	Pro	Leu	Glu	Ala	Val	Asn	Met	Ser	Leu	Gly	Leu	Ser	Leu	85	90	95
Val	Thr	Ala	Thr	Asn	Asn	Ala	Gln	Leu	Leu	Ala	Cys	Gly	Pro	Thr	Ala	100	105	110
Gln	Arg	Ala	Cys	Val	Lys	Asn	Met	Tyr	Ala	Lys	Gly	Ser	Cys	Leu	Leu	115	120	125
Leu	Gly	Ser	Ser	Leu	Gln	Phe	Ile	Gln	Ala	Val	Pro	Ala	Ser	Met	Pro	130	135	140
Glu	Cys	Pro	Arg	Gln	Glu	Met	Asp	Ile	Ala	Phe	Leu	Ile	Asp	Gly	Ser	145	150	155
Gly	Ser	Ile	Asn	Gln	Arg	Asp	Phe	Ala	Gln	Met	Lys	Asp	Phe	Val	Lys	165	170	175
Ala	Leu	Met	Gly	Glu	Phe	Ala	Ser	Thr	Ser	Thr	Leu	Phe	Ser	Leu	Met	180	185	190
Gln	Tyr	Ser	Asn	Ile	Leu	Lys	Thr	His	Phe	Thr	Phe	Thr	Glu	Phe	Lys	195	200	205
Asn	Ile	Leu	Asp	Pro	Gln	Ser	Leu	Val	Asp	Pro	Ile	Val	Gln	Leu	Gln	210	215	220
Gly	Leu	Thr	Tyr	Thr	Ala	Thr	Gly	Ile	Arg	Thr	Val	Met	Glu	Glu	Leu	225	230	235
Phe	His	Ser	Lys	Asn	Gly	Ser	Arg	Lys	Ser	Ala	Lys	Lys	Ile	Leu	Leu	245	250	255
Val	Ile	Thr	Asp	Gly	Gln	Lys	Tyr	Arg	Asp	Pro	Leu	Glu	Tyr	Ser	Asp	260	265	270
Val	Ile	Pro	Ala	Ala	Asp	Lys	Ala	Gly	Ile	Ile	Arg	Tyr	Ala	Ile	Gly	275	280	285
Val	Gly	Asp	Ala	Phe	Gln	Glu	Pro	Thr	Ala	Leu	Lys	Glu	Leu	Asn	Thr	290	295	300
Ile	Gly	Ser	Ala	Pro	Pro	Gln	Asp	His	Val	Phe	Lys	Val	Gly	Asn	Phe	305	310	315
Ala	Ala	Leu	Arg	Ser	Ile	Gln	Arg	Gln	Leu	Gln	Glu	Lys	Ile	Phe	Ala	325	330	335

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Ser Gln Glu Gly Phe Ser Ser Ala Leu Thr Ser Asp Gly Pro Val Leu
355 360 365

Gly Ala Val Gly Ser Phe Ser Trp Ser Gly Gly Ala Phe Leu Tyr Pro
370 375 380

Pro Asn Thr Arg Pro Thr Phe Ile Asn Met Ser Gln Glu Asn Val Asp
385 390 395 400

Met Arg Asp Ser Tyr Leu Gly Tyr Ser Thr Ala Val Ala Phe Trp Lys
405 410 415

Gly Val His Ser Leu Ile Leu Gly Ala Pro Arg His Gln His Thr Gly
420 425 430

Lys Val Val Ile Phe Thr Gln Glu Ala Arg His Trp Arg Pro Lys Ser
435 440 445

Glu Val Arg Gly Thr Gln Ile Gly Ser Tyr Phe Gly Ala Ser Leu Cys
450 455 460

Ser Val Asp Val Asp Arg Asp Gly Ser Xaa Asp Leu Val Leu Ile Gly
465 470 475 480

Ala Pro His Tyr Tyr Glu Gln Thr Arg Gly Gly Gln Val Ser Val Phe
485 490 495

Pro Val Pro Gly Val Arg Gly Arg Trp Gln Cys Glu Ala Thr Leu His
500 505 510

Gly Glu Gln Gly His Pro Trp Gly Arg Phe Gly Val Ala Leu Thr Val
515 520 525

Leu Gly Asp Val Asn Gly Asp Asn Leu Ala Asp Val Ala Ile Gly Ala
530 535 540

Pro Gly Glu Glu Glu Ser Arg Gly Ala Val Tyr Ile Phe His Gly Ala
545 550 555 560

Ser Arg Leu Glu Ile Met Pro Ser Pro Ser Gln Arg Val Thr Gly Ser
565 570 575

Gln Leu Ser Leu Arg Leu Gln Tyr Phe Gly Gln Ser Leu Ser Gly Gly
580 585 590

Gln Asp Leu Thr Gln Asp Gly Leu Val Asp Leu Ala Val Gly Ala Gln
595 600 605

Gly His Val Leu Leu Leu Arg Ser Leu Pro Leu Leu Lys Val Glu Leu
610 615 620

Ser Ile Arg Phe Ala Pro Met Glu Val Ala Lys Ala Val Tyr Gln Cys
625 630 635 640

Trp Glu Arg Thr Pro Thr Val Leu Glu Ala Gly Glu Ala Thr Val Cys
645 650 655

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Leu	Thr	Val	His 660	Lys	Gly	Ser	Pro	Asp 665	Leu	Leu	Gly	Asn	Val 670	Gln	Gly
Ser	Val	Arg 675	Tyr	Asp	Leu	Ala	Leu 680	Asp	Pro	Gly	Arg	Leu 685	Ile	Ser	Arg
Ala	Ile 690	Phe	Asp	Glu	Thr	Lys 695	Asn	Cys	Thr	Leu	Thr 700	Gly	Arg	Lys	Thr
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Cys	Val	Glu	Asp	Ala 725	Val	Ser	Pro	Ile	Ile 730	Leu	Arg	Leu	Asn	Phe 735	Ser
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Val	Gly	Ser 755	Gln	Asp	His	Ile	Thr 760	Ala	Ser	Leu	Pro	Phe 765	Glu	Lys	Asn
Cys	Lys 770	Gln	Glu	Leu	Leu	Cys 775	Glu	Gly	Asp	Leu	Gly 780	Ile	Ser	Phe	Asn
Phe 785	Ser	Gly	Leu	Gln	Val 790	Leu	Val	Val	Gly	Gly 795	Ser	Pro	Glu	Leu	Thr 800
Val	Thr	Val	Thr 805	Val	Trp	Asn	Glu	Gly	Glu 810	Asp	Ser	Tyr	Gly	Thr 815	Leu
Val	Lys	Phe	Tyr 820	Tyr	Pro	Ala	Gly	Leu 825	Ser	Tyr	Arg	Arg	Val 830	Thr	Gly
Thr	Gln 835	Gln	Pro	His	Gln	Tyr	Pro 840	Leu	Arg	Leu	Ala	Cys 845	Glu	Ala	Glu
Pro	Ala 850	Ala	Gln	Glu	Asp	Leu 855	Arg	Ser	Ser	Ser	Cys 860	Ser	Ile	Asn	His
Pro 865	Ile	Phe	Arg	Glu	Gly 870	Ala	Lys	Thr	Thr	Phe 875	Met	Ile	Thr	Phe	Asp 880
Val	Ser	Tyr	Lys 885	Ala	Phe	Leu	Gly	Asp	Arg 890	Leu	Leu	Leu	Arg	Ala 895	Lys
Ala	Ser	Ser	Glu 900	Asn	Asn	Lys	Pro	Asp 905	Thr	Asn	Lys	Thr	Ala 910	Phe	Gln
Leu	Glu 915	Leu	Pro	Val	Lys	Tyr	Thr 920	Val	Tyr	Thr	Leu	Ile 925	Ser	Arg	Gln
Glu 930	Asp	Ser	Thr	Asn	His 935	Val	Asn	Phe	Ser	Ser	Ser 940	His	Gly	Gly	Arg
Arg 945	Gln	Glu	Ala	Ala	His 950	Arg	Tyr	Arg	Val	Asn 955	Asn	Leu	Ser	Pro	Leu 960
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19

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<223> Description of Artificial Sequence: primer

<400> 58
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20

<210> 59
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<223> Description of Artificial Sequence: primer

<400> 59
ccaaagctgg ctgcatcctc tc

22

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<223> Description of Artificial Sequence: primer

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<223> Description of Artificial Sequence: primer

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gtcacagagg gaacctcc 18

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<223> Description of Artificial Sequence: primer

<400> 71
gctcctgagt gaggtgaaa tca 23

<210> 72
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<210> 73
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<400> 73
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22

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<210> 84

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32

<210> 90

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ggtgacacta tagaataggg c

21

<210> 91

<211> 18

<212> DNA

<213> Mus musculus

<400> 91

aagcaggagc tcctgtgt

18

<210> 92

<211> 852

<212> DNA

<213> rabbit

<220>

<221> CDS

<222> (61)..(852)

<400> 92

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Met Ala Leu Gly Ala Val Val Leu Leu Gly Val Leu Ala Ser Tyr His	
1 5 10 15	

gga ttc aac ttg gac gtg atg agc ggt gat ctt cca gga aga cgc agc	156
Gly Phe Asn Leu Asp Val Met Ser Gly Asp Leu Pro Gly Arg Arg Ser	
20 25 30	

ggg ctt cgg gca gag cgt gat gca gtt tgg gga tct cga ctc gtg gtg	204
Gly Leu Arg Ala Glu Arg Asp Ala Val Trp Gly Ser Arg Leu Val Val	
35 40 45	

gga gcc ccc ctg gcg gtg gtg tcg gcc aac cac aca gga cgg ctg tac	252
Gly Ala Pro Leu Ala Val Val Ser Ala Asn His Thr Gly Arg Leu Tyr	
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gag tgt gcg cct gcc tcc ggc acc tgc acg ccc att ttc cca ttc atg	300
Glu Cys Ala Pro Ala Ser Gly Thr Cys Thr Pro Ile Phe Pro Phe Met	
65 70 75 80	

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Pro Pro Glu Ala Val Asn Met Ser Leu Gly Leu Ser Leu Ala Ala Ser	
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Pro Asn His Ser Gln Leu Leu Ala Cys Gly Pro Thr Val His Arg Ala	
100 105 110	
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Cys Gly Glu Asp Val Tyr Ala Gln Gly Phe Cys Val Leu Leu Asp Ala	
115 120 125	
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His Ala Gln Pro Ile Gly Thr Val Pro Ala Ala Leu Pro Glu Cys Pro	
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Asp Gln Glu Met Asp Ile Val Phe Leu Ile Asp Gly Ser Gly Ser Ile	
145 150 155 160	
agc tca aat gac ttc cgc aag atg aag gac ttt gtc aga gct gtg atg	588
Ser Ser Asn Asp Phe Arg Lys Met Lys Asp Phe Val Arg Ala Val Met	
165 170 175	
gac cag ttc aag gac acc aac acc cag ttc tcg ctg atg cag tac tcc	636
Asp Gln Phe Lys Asp Thr Asn Thr Gln Phe Ser Leu Met Gln Tyr Ser	
180 185 190	
aat gtg ctg gtg aca cat ttc acc ttc agc agc ttc cgg aac agc tcc	684
Asn Val Leu Val Thr His Phe Thr Phe Ser Ser Phe Arg Asn Ser Ser	
195 200 205	
aat cct cag ggc cta gtg gag ccc att gtg cag ctg aca ggc ctc acg	732
Asn Pro Gln Gly Leu Val Glu Pro Ile Val Gln Leu Thr Gly Leu Thr	
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Phe Thr Ala Thr Gly Ile Leu Lys Val Val Thr Glu Leu Phe Gln Thr	
225 230 235 240	
aag aac ggg gcc cgc gaa agt gcc aag aag atc ctc atc gtc atc aca	828
Lys Asn Gly Ala Arg Glu Ser Ala Lys Lys Ile Leu Ile Val Ile Thr	
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gat ggg cag aag tac aaa gcg gca	852
Asp Gly Gln Lys Tyr Lys Ala Ala	
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<220>
<223> Description of Artificial Sequence: primer

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22

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 95

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<210> 96

<211> 2499

<212> DNA

<213> Homo sapiens

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Ser Leu Glu Leu Thr Val Thr Val Thr Val Arg Asn Glu Gly Glu Asp
130 135 140

Ser Tyr Gly Thr Ala Ile Thr Leu Tyr Tyr Pro Ala Gly Leu Ser Tyr
145 150 155 160

Arg Arg Val Ser Gly Gln Thr Gln Pro Trp Gln Arg Pro Leu His Leu
165 170 175

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Ala Cys Glu Ala Val Pro Thr Glu Ser Glu Gly Leu Arg Ser Thr Ser
180 185 190

Cys Ser Val Asn His Pro Ile Phe Gln Gly Gly Ala Gln Gly Thr Phe
195 200 205

Val Val Lys Phe Asp Val Ser Ser Lys Ala Ser Leu Gly Asp Arg Leu
210 215 220

Leu Met Gly Ala Ser Ala Ser Ser Glu Asn Asn Lys Pro Ala Ser Asn
225 230 235 240

Lys Thr Ser Phe Glu Leu Glu Leu Pro Val Lys Tyr Ala Val Tyr Met
245 250 255

Met Ile Thr Arg His Glu Gly Ser Thr Arg Phe Phe Asn Phe Ser Thr
260 265 270

Ser Ala Glu Lys Ser Ser Lys Glu Ala Glu His Arg Tyr Arg Val Asn
275 280 285

Asn Leu Ser Leu Arg Asp Val Ala Val Ser Val Asp Phe Trp Ala Pro
290 295 300

Val Gln Leu Asn Gly Ala Ala Val Trp Asp Val Ala Val Glu Ala Pro
305 310 315 320

Ala Gln Ser Leu Pro Cys Ala Arg Glu Arg Glu Pro Pro Arg Thr Ser
325 330 335

Asp Leu Ser Arg Val Pro Gly Ser Pro Val Leu Asp Cys Ser Val Ala
340 345 350

His Cys Leu Arg Phe Arg Cys His Ile Pro Ser Phe Ser Ala Lys Glu
355 360 365

Glu Leu His Phe Thr Leu Lys Gly Asn Leu Ser Phe Ala Trp Val Ser
370 375 380

Gln Met Leu Gln Lys Lys Val Ser Val Val Ser Val Ala Glu Ile Thr
385 390 395 400

Phe Asn Arg Ala Val Tyr Ser Gln Val Pro Gly Glu Glu Pro Phe Met
405 410 415

Arg Ala Gln Val Glu Thr Val Leu Glu Glu Tyr Glu Glu His Asp Pro
420 425 430

Val Pro Leu Val Val Gly Ser Cys Val Gly Gly Leu Leu Leu Leu Ala
435 440 445

Leu Ile Ser Ala Thr Leu Tyr Lys Leu Gly Phe Phe Lys Arg Arg Tyr
450 455 460

Lys Glu Met Leu Gly Glu Lys Pro Gly Asp Ala Ala Thr Phe Pro Gly
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Glu Asp Ala Ser Cys Gly Ala Ser Asp Leu Pro Leu Ser Gln
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Gly

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